User Manual

H.264
NETWORK CAMERA

Class A Device (Commercial Broadcasting & Communication Equipment)

This equipment is Industrial (Class A) electromagnetic wave suitability equipment and seller and user should take note that this equipment is not designed to be used in the home.

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Important Safety Precautions

1) Read these instructions carefully.

2) Keep these instructions separately.

3) Heed all warnings.

4) Follow all the instructions.

5) Do not use this apparatus near water or in damp places.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.

9) Be careful not to step on UTP cable or twist it. Pay particular attention if the UTP cable is located near an electrical outlet.

10) Only use the attachments/accessories specified by manufacturer.

11) Only use the genuine accessories such as cart, stand, tripod, bracket, or table specified by manufacturer or sold with the apparatus.
This apparatus may topple over when being carried in a handcart. Be careful not to be injured.

12) Unplug this apparatus during thunderstorms or when it is unused for long periods of time.

13) Contact the qualified service engineer if this apparatus needs to be repaired. Repair service is required when the apparatus has been damaged in any way or does not operate normally after damage to its power-supply cord or plug, liquid has been spilled on it, objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture.

Overview

Caution

Risk Group1

WARNING IR emitted from this product. Do not stare at operating lamp

Product tested against IEC62471

Warning

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
To prevent any injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.

1) Only use the standard PoE (Power over Ethernet) specified in the Specifications. If not using recommended PoE, the apparatus may be damaged by fire, electric shock, or other cause.
2) Install the camera stably and securely. Otherwise, the camera may fall down and cause human injury.
3) Do not put any electric conductor (such as screw driver, coin, metallic objects, etc.) or vessels containing water on the camera to prevent any human injury due to fire, electric shock or product falling over.
4) Install the apparatus in a clean, dry place without moisture, dust, soot, etc. Otherwise, it may cause fire or electric shock.
5) If any unusual smell or smoke comes out of the product, stop it. In this case, unplug the power cord immediately and contact your local service center to get appropriate technical support. If you go on using the apparatus without taking any action, fire or electric shock may arise.
6) If the apparatus malfunctions, contact your local service center. Do not disassemble or interfere with the apparatus. (ITX is not liable for any problems caused by your interfering or unauthorized repairs without any prior approval of ITX.)
7) Do not spray water directly onto the apparatus when cleaning. Otherwise, it may cause fire or electric shock.
8) Do not install where it is directly exposed to the cool air from an air-conditioner louver. Otherwise, condensation may form on the inside of the camera due to the temperature difference between the inside and the outside of the dome camera.

When installing the apparatus in a place with low temperature such as frozen storage, seal up the plumbing pipes with silicon to prevent cold air from penetrating the housing.
Otherwise, humid air infiltrates into the inner housing and condensation may form due to the temperature difference between the inside and the outside of the apparatus.

1) Do not drop any object on the apparatus or apply force to it. Do not install where it is subject to vibration or influence by electromagnetic interference.

2) Do not install in a place with high temperature (above 50°C), low temperature (below 0°C), or humid air. Otherwise, it may cause fire or electric shock.

3) When moving the installed apparatus, unplug the apparatus before moving or reinstalling it.

4) Unplug the power (PoE) cable from the camera during thunderstorms. Otherwise, it may cause fire or damage to the apparatus.

5) Do not install it near a heat source such as a radiator, or in direct sunlight. It may cause fire.

6) Install this apparatus where it is well ventilated.

7) Do not install this apparatus in a place where it faces extremely strong light such as direct sunlight. It may damage the image sensor.

8) Do not install this apparatus in a place where water leaks or splashes. Do not any put object containing water such as a pot on this apparatus.

9) Avoid damage to the main power plug.

10) When operating the apparatus outside, condensation may form due to the temperature difference between the inside and the outside of the apparatus. Check if the internal fan works normally before operating it outside.

11) Make sure that the LAN Ethernet cable does not extend to the outside of the building.

Before Installing

- The apparatus must be installed by a qualified engineer in accordance with relevant regulations.
- Appropriate protective devices must be fitted to prevent the network camera being damaged by a sudden voltage fluctuation when lightning flashes.
- Comply with every instruction for the safety of the network camera.
- Before cleaning, stop the network camera and unplug its power cable.
  Use only a soft and dry cloth. Do not use an abrasive.
- You must not repair the apparatus personally. Electric shock may be caused by high voltage electricity when opening/closing the cover.
  Contact the qualified service engineer if the apparatus needs to be repaired.

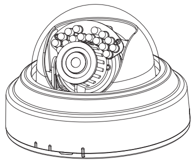
Overview

Product Features

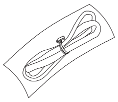
This product is a network camera with the latest H.264, MJPEG compression algorithm that is suitable for high performance video security system.
Adopted IR LED and changeable Day&Night filter for use under a low illumination condition (0 Lux), and provides clearer and sharper monitoring image quality at all times, day and night.

- H.264 / MJPEG dual codec
- Fixed lens adopted
- True Day&Night (filter change method)
- Easy installation (analog video output)
- Operating in 30 fps

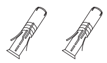
What's Included



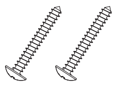
Camera



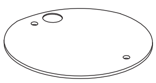
BNC CABLE (1EA)



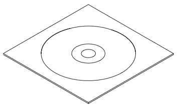
ANCHOR (2EA)



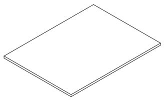
SCREW (2EA)
(TH / M4 x 30)



TEMPLATE PAPER



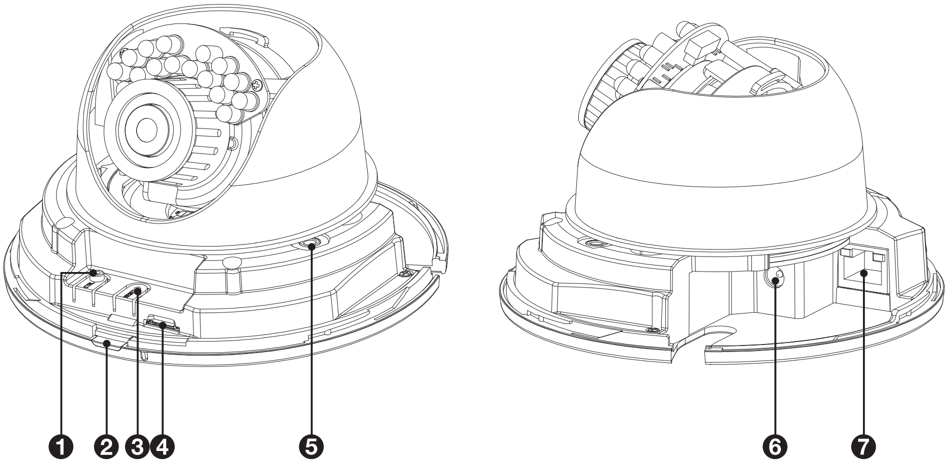
CD MANUAL



Quick Guide

Overview

At a Glance



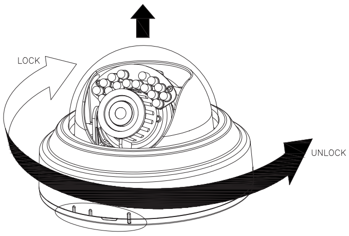
Item	Name	Description
❶	Control Button	Used to change format and reset to factory default depending on its operating method. - To change analog format : Press and hold for less than 5 seconds. - To reset to factory default : Press and hold for more than 10 seconds.
❷	Status Indicator	Used to display the system operation status of your camera.
❸	Reset Button	Press and hold for more than 5 seconds.
❹	Micro SD Card Slot	Allows a Micro SD card to be inserted.
❺	Video Output for Service Monitor	Analog video out terminal which is used in installing.
❻	DC 12 V Support	Used to connect to a power cable.
❼	Network	Used to connect the PoE cable between power supply and network.

Installing

To remove the cover

Before installing the camera, the cover should be removed.

1. Hold the bottom of the camera and turn the dome cover counterclockwise.
2. Put the dome cover in a safe place, to reassemble it once you finished camera installation.



Installing on the ceiling

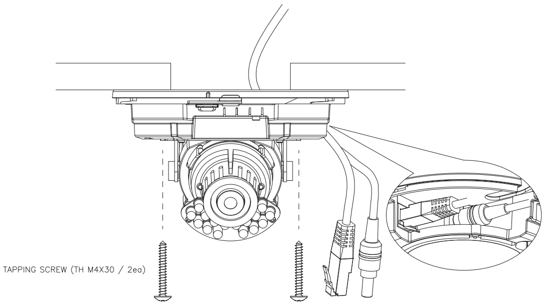
You can install the camera on the ceiling, and then adjust and fix its angle.

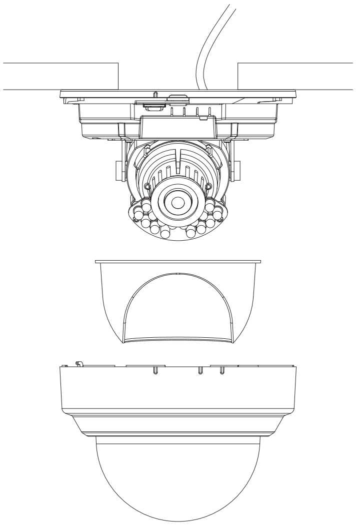
1. Find a suitable location on the ceiling to install the camera.

   ✔ It must be installed in a place where it can bear the camera's weight.

   ✔ It is recommended to inject silicon into the gap between the camera and the ceiling for secure waterproofing.

2. Fix the camera main body onto the ceiling using the screws provided.





To mount on a ground surface

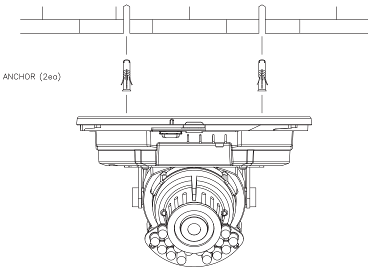
Install the camera on a surface and adjust the tilt angle to focus on a desired location.

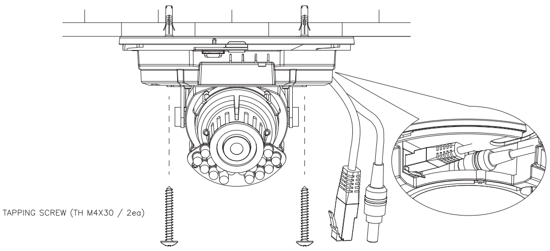
1. Choose the location on the surface to install the camera.

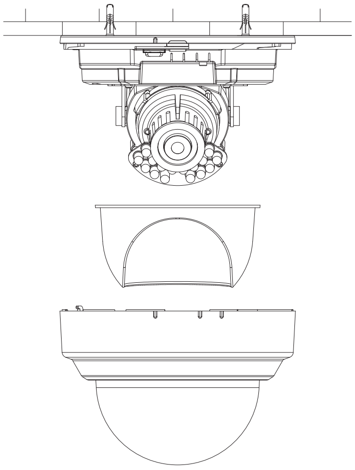
   ✔ It must be installed in a place where it can bear the camera's weight.

2. Fix the camera body to the surface with the screw provided.

   ✔ For waterproof operation, silicon treatment between camera and surface is recommended.



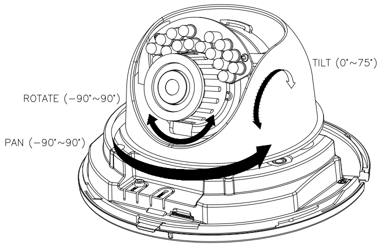




Adjustment

After installing your camera on a ceiling or wall, you can adjust the camera angle to allow the camera lens to capture the target site.

1. Install the camera on a ceiling or wall wherever you want.
2. Adjust the camera angle by moving left, right, up or down to focus on your target site.
3. Reassemble the Dome Cover and fasten the screws.



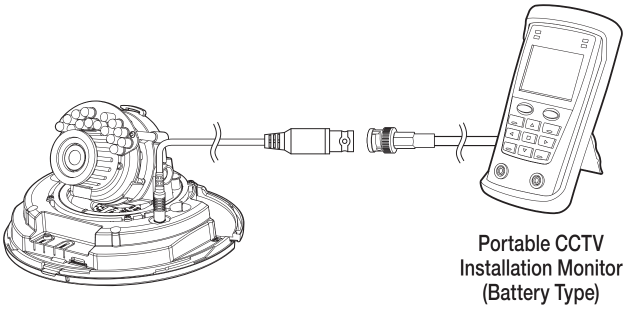
Installation

Connecting to External Device

Installation monitor

Connect the video output cable of the network camera with the installation monitor.
You can watch the video input from the installed camera in the monitor.

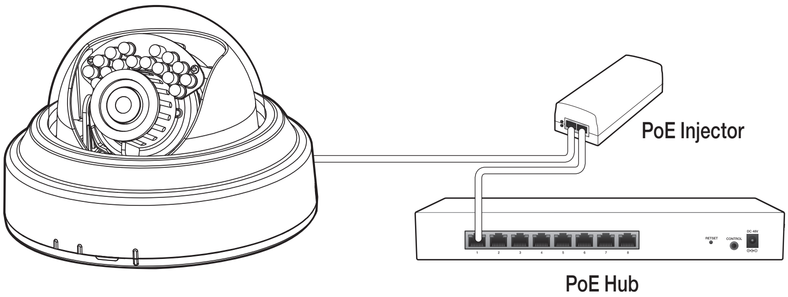
- ! You should not use the installation monitor continuously as it is only designed to check the video output during the camera installation process.
- ! To change the video output settings, refer to the "**Analog Output Setup**". (page 27)



Connecting with power supply

Connect the PoE (Power Over Ethernet) cable between the power supply and the network port.

- ! If your network camera is installed as standalone setup, the power should be supplied by PoE Hub.
- ! You must not connect to multiple power sources.

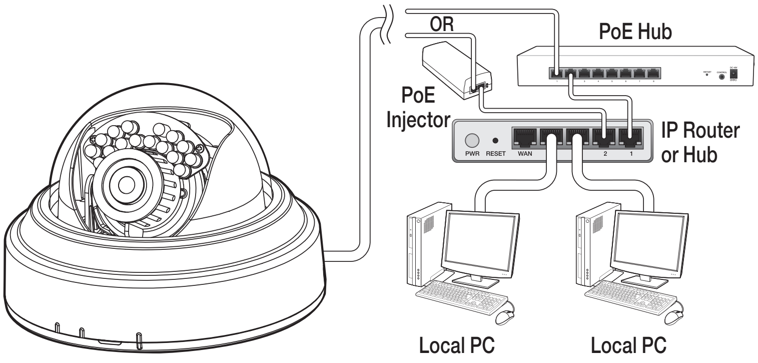


Connecting to the network

To connect with a PC in local network

If you connect the network camera with a PC in the same network, you can perform monitoring and setting process by using the PC's Web Viewer.

1. Connect the network port on the back panel with a router or hub.



2. Connect a local PC with a router or hub.
3. Enter the address in “**https://IP address:web service port**” format in address window of the web browser or dedicated software program at local PC. (page 15)

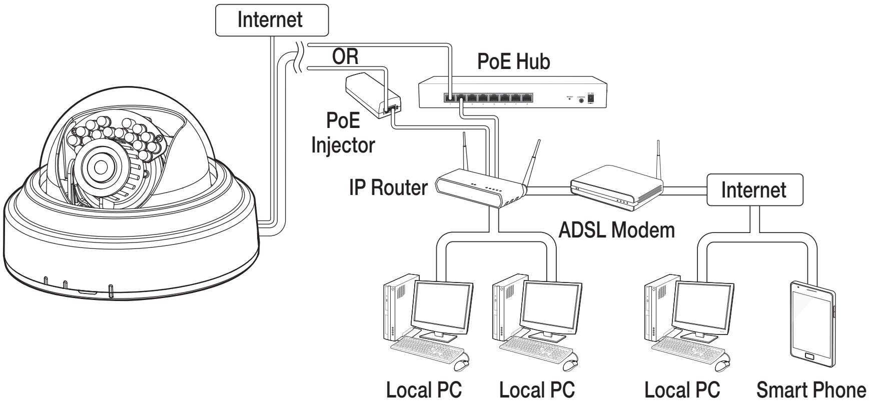
   ✔ Ex : https://192.168.0.23:80 web service port is set as 80 by factory default. You can modify the port number in Network Setup screen.

4. Enter your ID and password to log in. You can watch the monitoring screen after login.

   ! You must register your login password when accessing for the first time.
   To change your password, refer to "**How to connect to the camera**". (page 15)

To connect with a PC in remote network

You can access the network camera from your PC through the internet.


Internet
OR
PoE Hub
PoE Injector
IP Router
ADSL Modem
Internet
Local PC
Local PC
Local PC
Smart Phone

1. Connect router's network port directly with static IP LAN cable or with the ADSL modem.
2. If using a router, you should configure the port forwarding settings.
   - ✔ You can get relevant support from your router manufacturer or qualified installation company for how to configure the port forwarding of your router.
   - ✔ When you access the network camera from your PC via internet, make sure to access the following site.

What is Web Viewer?

Before connecting

When using internet access, set the port number as 554 and 80 in your router port forwarding settings.
For more information about port forwarding settings, refer to the user manual of your router.

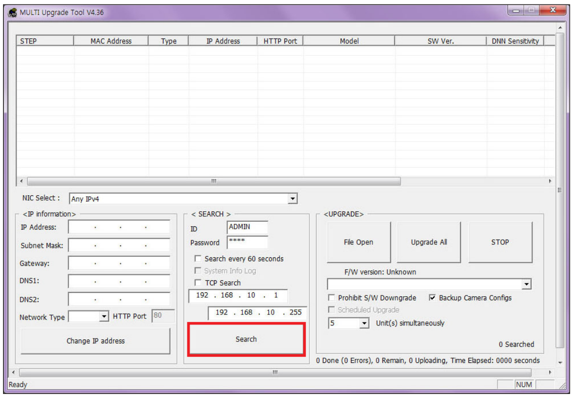
Minimum PC Specifications for Web Viewer

CPU	P4 3.0 or higher
RAM	512MB or higher
VGA	Geforce MX 400, Radeon 7500 or higher
VGA memory	64MB
Monitor	1280X1024
Browser	Internet Explorer, Firefox, Chrome, Smart Phone(iOS, Android)
IE version	IE8.0 or higher
Network	100Mbps
DIRECT X	V 7.0 or higher

How to connect to the camera

Since the network settings of your network camera are not configured by factory default, you cannot access to WebRA. To configure your network, run the "**MDload**" in CD to check the IP and access to your camera.

1. Press <**Search**> button to search for the network camera linked to your network.


MULTI Upgrade Tool V4.36
STEP
MAC Address
Type
IP Address
HTTP Port
Model
SW Ver.
DNN Sensitivity
<IP information>
IP Address:
Subnet Mask:
Gateway:
DNS1:
DNS2:
Network Type
HTTP Port
Change IP address
< SEARCH >
Search
<UPGRADE>
File Open
Upgrade All
STOP

NIC Select : Any IPv4

HTTP Port 80

ID ADMIN

Password ****

☐ Search every 60 seconds

☐ System Info Log

☐ TCP Search

192 . 168 . 10 . 1

192 . 168 . 10 . 255

F/W version: Unknown

☐ Prohibit S/W Downgrade ☑ Backup Camera Configs

☐ Scheduled Upgrade

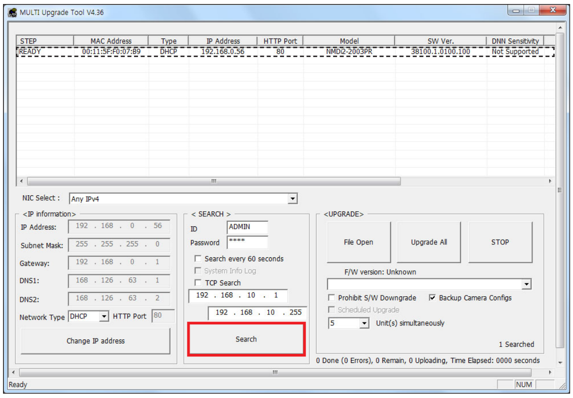
5 Unit(s) simultaneously

0 Searched

0 Done (0 Errors), 0 Remain, 0 Uploading, Time Elapsed: 0000 seconds

Ready NUM

2. The search results are displayed if finished. You can distinguish your network camera(s) by checking its model information. Click your desired apparatus whose network settings you want to configure in the list.



MULTI Upgrade Tool V4.36

STEP	MAC Address	Type	IP Address	HTTP Port	Model	SW Ver.	DNN Sensitivity
READY	00:11:5F:F0:07:B9	DHCP	192.168.0.56	80	NMDi2-2003PR	38100.1.0100.100	Not Supported

NIC Select : Any IPv4

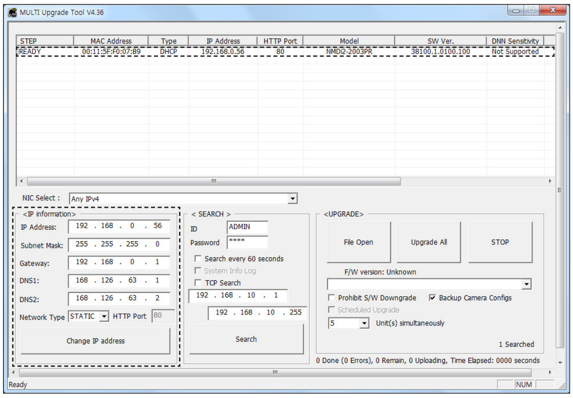
<IP information>
IP Address: 192 . 168 . 0 . 56
Subnet Mask: 255 . 255 . 255 . 0
Gateway: 192 . 168 . 0 . 1
DNS1: 168 . 126 . 63 . 1
DNS2: 168 . 126 . 63 . 2
Network Type DHCP HTTP Port 80

< SEARCH >
ID ADMIN
Password ****
☐ Search every 60 seconds
☐ System Info Log
☐ TCP Search
192 . 168 . 10 . 1
192 . 168 . 10 . 255

<UPGRADE>
F/W version: Unknown
☐ Prohibit S/W Downgrade ☑ Backup Camera Configs
☐ Scheduled Upgrade
5 Unit(s) simultaneously
1 Searched
0 Done (0 Errors), 0 Remain, 0 Uploading, Time Elapsed: 0000 seconds
Ready

3. Select "**DHCP**" or "**STATIC**" for <**Network Type**> in bottom left. If selecting "**STATIC**", enter the values for IP Address, Subnet Mask, Gateway, and DNS information, and then press <**Apply**>.

✔ To use DHCP (Dynamic Host Configuration Protocol), your network camera must be connected to the corresponding device such as DHCP server (router). When connecting your PC with a network camera directly on a one-to-one basis, you cannot use DHCP and watch the video from the network camera which has been remotely connected via internet.



MULTI Upgrade Tool V4.36

STEP	MAC Address	Type	IP Address	HTTP Port	Model	SW Ver.	DNN Sensitivity
READY	00:11:5F:F0:07:B9	DHCP	192.168.0.56	80	NMDi2-2003PR	38100.1.0100.100	Not Supported

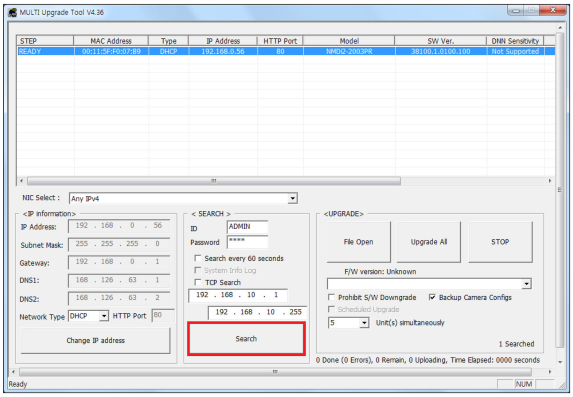
NIC Select : Any IPv4

<IP information>
IP Address: 192 . 168 . 0 . 56
Subnet Mask: 255 . 255 . 255 . 0
Gateway: 192 . 168 . 0 . 1
DNS1: 168 . 126 . 63 . 1
DNS2: 168 . 126 . 63 . 2
Network Type STATIC HTTP Port 80

< SEARCH >
ID ADMIN
Password ****
☐ Search every 60 seconds
☐ System Info Log
☐ TCP Search
192 . 168 . 10 . 1
192 . 168 . 10 . 255

<UPGRADE>
F/W version: Unknown
☐ Prohibit S/W Downgrade ☑ Backup Camera Configs
☐ Scheduled Upgrade
5 Unit(s) simultaneously
1 Searched
0 Done (0 Errors), 0 Remain, 0 Uploading, Time Elapsed: 0000 seconds
Ready

4. The list is automatically updated in a moment. Check if all the values look correct and finish the network environment settings.



MULTI Upgrade Tool V4.36

STEP	MAC Address	Type	IP Address	HTTP Port	Model	SW Ver.	DNN Sensitivity
READY	00:11:5F:F0:07:B9	DHCP	192.168.0.56	80	NMDi2-2003PR	38100.1.0100.100	Not Supported

NIC Select : Any IPv4

<IP information>
IP Address: 192 . 168 . 0 . 56
Subnet Mask: 255 . 255 . 255 . 0
Gateway: 192 . 168 . 0 . 1
DNS1: 168 . 126 . 63 . 1
DNS2: 168 . 126 . 63 . 2
Network Type DHCP HTTP Port 80

< SEARCH >
ID ADMIN
Password ****
☐ Search every 60 seconds
☐ System Info Log
☐ TCP Search
192 . 168 . 10 . 1
192 . 168 . 10 . 255

<UPGRADE>
F/W version: Unknown
☐ Prohibit S/W Downgrade ☑ Backup Camera Configs
☐ Scheduled Upgrade
5 Unit(s) simultaneously
1 Searched
0 Done (0 Errors), 0 Remain, 0 Uploading, Time Elapsed: 0000 seconds
Ready

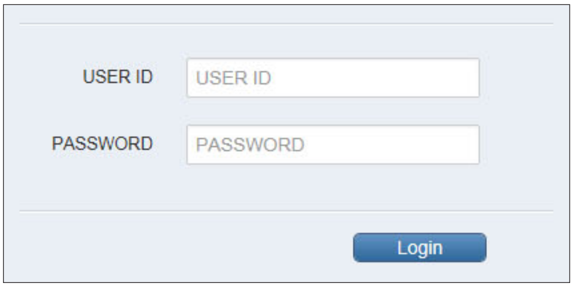
5. Security page (Internet Explorer) is displayed.

   ✔ Ex) The https://192.168.0.4:80 changes into http://192.168.0.4:80.

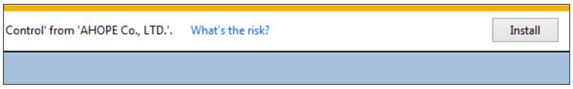
6. Click <**Continue to this website (not recommended).**>.

7. Enter your ID and password in the ID input window.

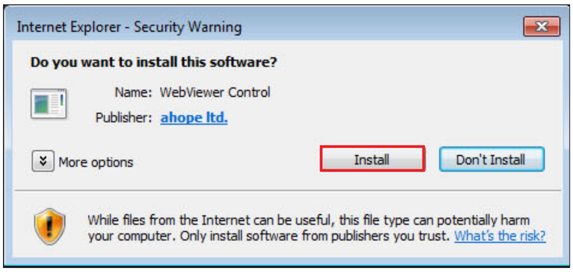
   ✓ Default user name : ADMIN
   Password : 1234



8. You should run the activities after installing corresponding Active-X.


Control' from 'AHOPE Co., LTD.'. What's the risk?

9. If Active-X failed to install, check the ActiveX option in IE Security menu.
   If the Active-X installation window does not appear in the top right area for a long time (longer than 1 minute), change the “**Internet Options**” settings. (page 18)


Internet Explorer - Security Warning

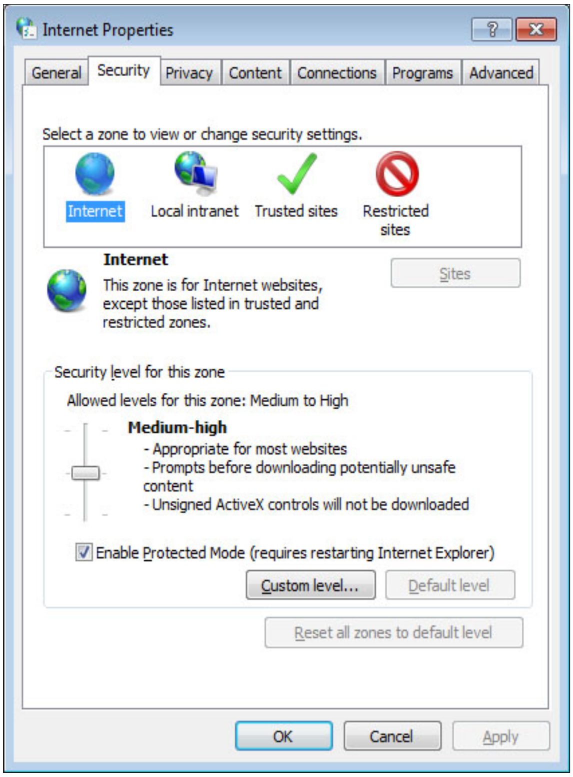
Do you want to install this software?

Name: WebViewer Control
Publisher: ahope ltd.

While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Web Viewer

10. "Control Panel > Internet Options > Security" menu, press [**Custom level...**] button.


Internet Properties
General
Security
Privacy
Content
Connections
Programs
Advanced
Internet
Local intranet
Trusted sites
Restricted sites
Sites
Custom level...
Default level
Reset all zones to default level
OK
Cancel
Apply

Select a zone to view or change security settings.

Internet

This zone is for Internet websites, except those listed in trusted and restricted zones.

Security level for this zone

Allowed levels for this zone: Medium to High

Medium-high

- Appropriate for most websites
- Prompts before downloading potentially unsafe content
- Unsigned ActiveX controls will not be downloaded

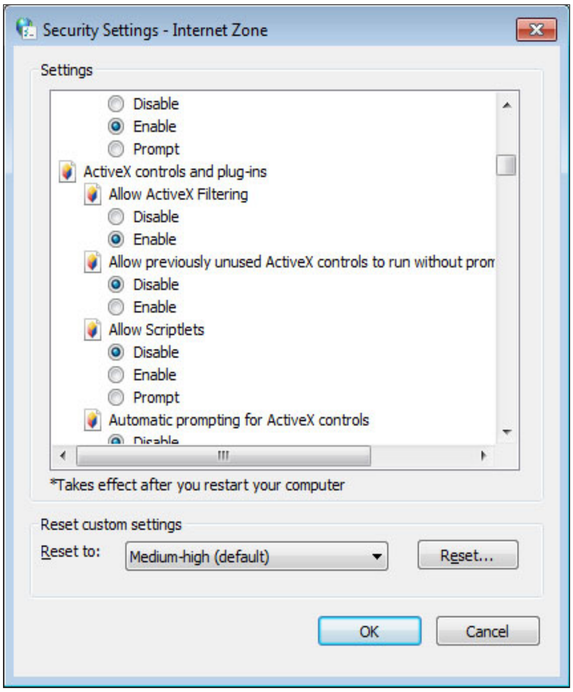
☑ Enable Protected Mode (requires restarting Internet Explorer)

11. Select all the ActiveX-related options as available.

✔ Ex : Download signed ActiveX controls, Download unsigned ActiveX controls···.

12. Finish the Security settings, and then press [**OK**] button.

✔ Check “Do not include local path when uploading files to the server”.

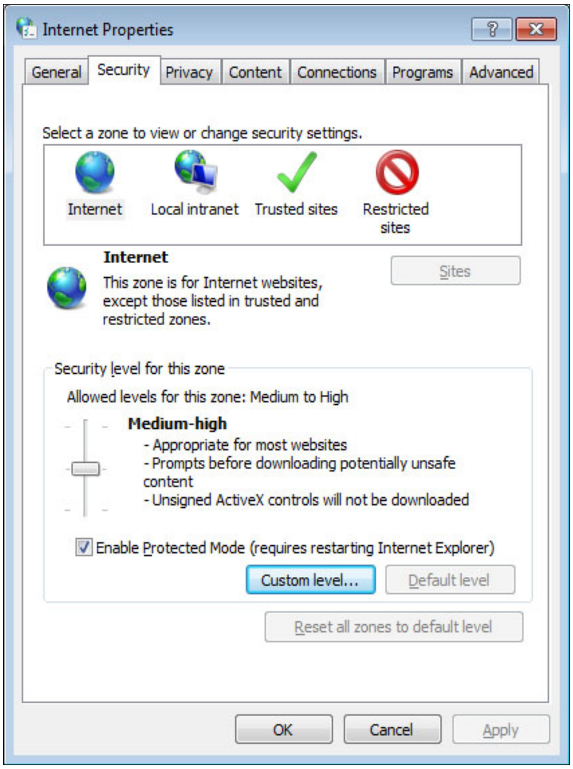

Security Settings - Internet Zone
Settings
Reset custom settings
Reset...
OK
Cancel

○ Disable
● Enable
○ Prompt
ActiveX controls and plug-ins
Allow ActiveX Filtering
○ Disable
● Enable
Allow previously unused ActiveX controls to run without prom
● Disable
○ Enable
Allow Scriptlets
● Disable
○ Enable
○ Prompt
Automatic prompting for ActiveX controls

*Takes effect after you restart your computer

Reset to: Medium-high (default)

13. Click [**OK**] button to restart the IE.


Internet Properties
General
Security
Privacy
Content
Connections
Programs
Advanced
Internet
Local intranet
Trusted sites
Restricted sites
Sites
Custom level...
Default level
Reset all zones to default level
OK
Cancel
Apply

Select a zone to view or change security settings.

Internet

This zone is for Internet websites, except those listed in trusted and restricted zones.

Security level for this zone

Allowed levels for this zone: Medium to High

Medium-high

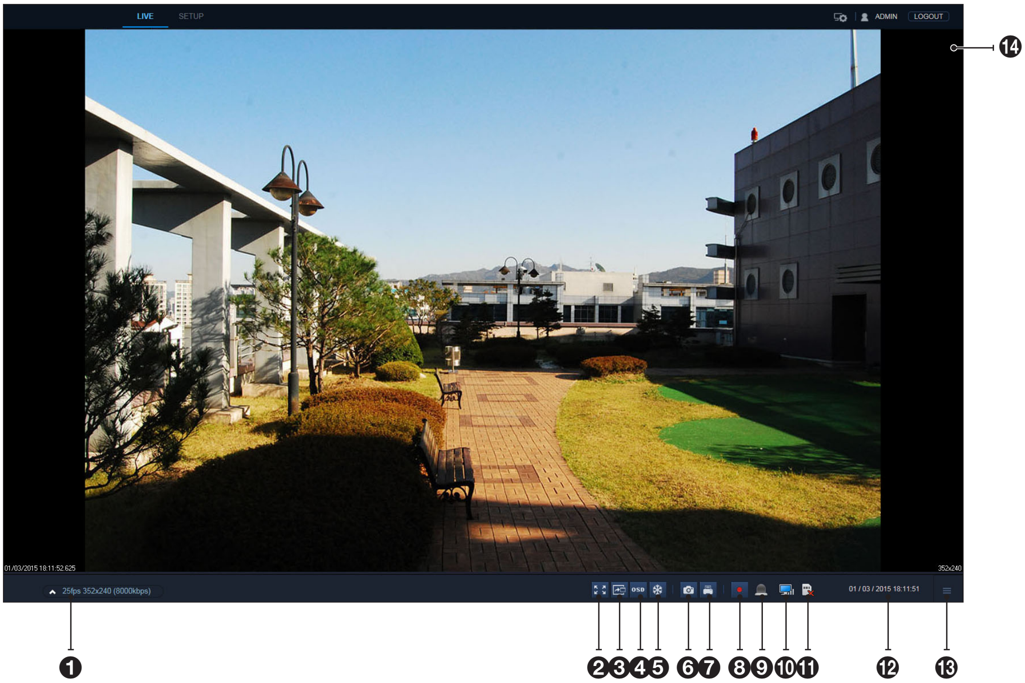
- Appropriate for most websites
- Prompts before downloading potentially unsafe content
- Unsigned ActiveX controls will not be downloaded

☑ Enable Protected Mode (requires restarting Internet Explorer)

Web Viewer

Live

Learning the Live screen


LIVE
SETUP
ADMIN
LOGOUT
01/03/2015 18:11:52.625
352x240
25fps 352x240 (8000kbps)
OSD
01 / 03 / 2015 18:11:51
❶
❷
❸
❹
❺
❻
❼
❽
❾
❿
⓫
⓬
⓭
⓮

Item	Name	Description
❶	Stream Change	If selecting Dual Stream, the streams are shifted in the order of the 1st (the first stream) ◂▸ 2nd (the second stream).
❷	Full Screen	Displays the image in full screen.
❸	Multi Window	Plays the video in two screens.
❹	OSD	Display or hide the OSD menu on the screen.
❺	Freeze	Stops transmitting the image manually.
❻	Snapshot	Saves current image as .jpg image file.
❼	Print	Prints current screen.
❽	Panic Record	Start the panic recording.

Item	Name	Description
❾	Event Status	Turns on if an event occurs. It does not turn on if no reaction to the event is yet defined. Click this to check the information of the event that occurred.
❿	Stream Status	Click to display the network information.
⓫	Storage Information	Displays the storage information of the Micro SD Card.
⓬	Timeline Date	Display the current time and date.
⓭	Event Status/ Information	Click to see the event status, network information, streaming session, storage status, and system status.
⓮	🏃	A motion is detected by the connected camera.

Stream Change

Since this camera supports the 'dual streaming' transmission, you can shift between the 1st stream and the 2nd stream by clicking the < ^ 30fps 1920x1080 (8000kbps) >.

✔ You can shift between the streams only if the 2nd stream is set in "**Setup** > **Video** > **Codec**". (page 23)

Full Screen

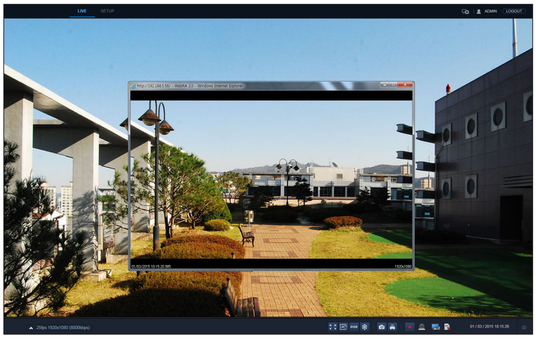
1. Click < ⛶ >.
2. Locate your mouse pointer over an image and then double-click to display in full screen.
3. If you want to go back, double-click your mouse button over the image.
   You can go back by pressing the [**Esc**] key on your keyboard or right-clicking.

Web Viewer

Multi Window

Click the < ⧉ > to display video in a small popup window instead of the default screen.

✔ In the small popup window, menu selection is not available.

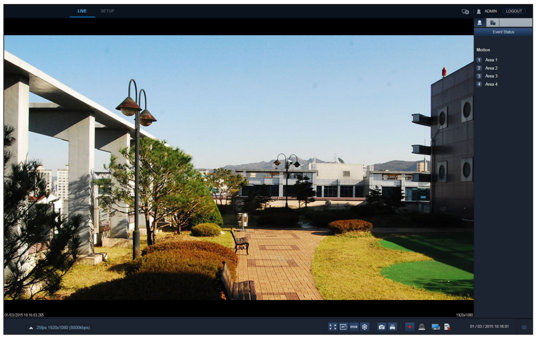

LIVE
SETUP
ADMIN
LOGOUT

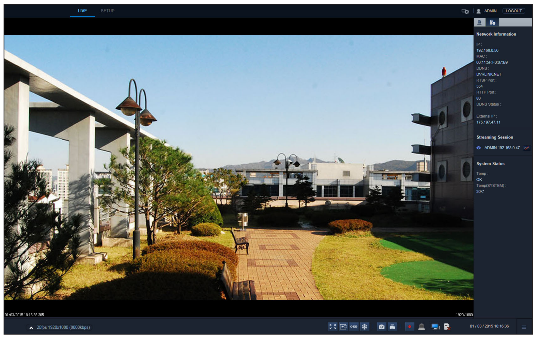
Snapshot

Click < 📷 > to save current image as .jpg file.

Event Status/Information

You can set Motion, etc. in Event Status.
The Information displays general information about your camera such as Network Information, Streaming Session, System Status, etc.


LIVE
SETUP
ADMIN
LOGOUT
Event Status
Motion
1 Area 1
2 Area 2
3 Area 3
4 Area 4
1920x1080
01 / 03 / 2015 18:16:01


LIVE
SETUP
ADMIN
LOGOUT

Network Information

IP : 192.168.0.56
MAC : 00:11:5F:F0:07:B9
DDNS : DVRLINK.NET
RTSP Port : 554
HTTP Port : 80
DDNS Status :
External IP : 175.197.47.11

Streaming Session

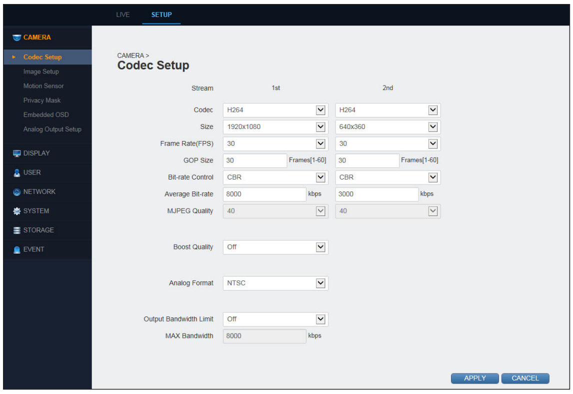
ADMIN 192.168.0.47

System Status

Temp : OK
Temp(SYSTEM) : 20℃

CAMERA

Codec Setup



CAMERA >
Codec Setup

Stream	1st	2nd
Codec	H264	H264
Size	1920x1080	640x360
Frame Rate(FPS)	30	30
GOP Size	30 Frames[1-60]	30 Frames[1-60]
Bit-rate Control	CBR	CBR
Average Bit-rate	8000 kbps	3000 kbps
MJPEG Quality	40	40
Boost Quality	Off	
Analog Format	NTSC	
Output Bandwidth Limit	Off	
MAX Bandwidth	8000 kbps	

You can set various video functions for the camera depending on the field situation.
When finishing the setup process, click <**APPLY**> to apply.

- Codec : This network camera can transmit videos in different resolutions and qualities simultaneously using different CODECs.
  You can select <**H.264**> or <**MJPEG**>.
  - H.264 : Video compression standard to transmit high quality video stream efficiently. H.264 is available in various networks and systems and allows the bit rate to be controlled according to adjusted bandwidth usage.
  - MJPEG : You can edit each frame freely even if it is already compressed and get high quality images when restoring. Though Motion JPEG uses a considerable amount of bandwidth, it provides excellent quality for each image.
- Size : You can change each network transmission resolution for your camera.
- Frame Rate(FPS) : You can set the frame (rate) for camera video.

✔ If network speed is fast enough, you can set Frame Rate as 30 fps to have more natural video.

- GOP Size : The faster the subject in video moves, the smaller the GOP Size should be. However, the slower the subject in video moves, the bigger the GOP Size should be.
- Bit-rate Control : You can select <**CBR**> or <**VBR**>.
  - CBR (Constant Bit Rate): Only limited bandwidth of H.264 is available. Select this option only if H.264 is more important than image quality.
  - VBR (Variable Bit Rate): Select if image quality must remain high.
- Average Bit-rate : You can set average bit rate.

✔ Enter a value within a range of 512 Kbps ~ 8000 kbps.

- Boost Quality : Works if Motion (Motion Detection) area has been set in network camera event and <**ON**> has been selected. When an event is triggered, camera's instant FPS value is changed into the specified Boost FPS value.
- Analog Format : Select <**NTSC**> and press <**APPLY**> button.
- Output Bandwidth Limit : You can select whether to limit bandwidth or not.
- MAX Bandwidth : Specifies the peak bandwidth.
  You can enter your desired value if selecting <**ON**> for Bandwidth Limit.

✔ Enter a value within a range of 1000 kbps~30 Mbps.

Web Viewer

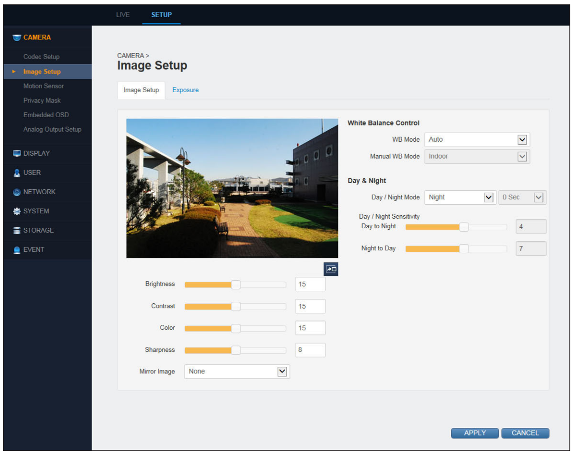
Image Setup

1. Image Setup

You can set the following items to make the installed camera have the best image optimized for its environment. When finishing the setup process, click <**APPLY**> to apply.

- White Balance Control
  - › WB Mode : Automatically correct the color balance of your camera to make a natural-looking screen.
    - MANUAL : User adjusts 'White Balance' manually.
    - AUTO : Camera adjusts 'White Balance' automatically.
    - AUTO (wide mode) : Camera adjusts 'Wide White Balance' automatically.

✔ Except for some special cases, <**AUTO**> is generally recommended.



White Balance Control
WB Mode: Auto
Manual WB Mode: Indoor

Day & Night
Day / Night Mode: Night, 0 Sec
Day / Night Sensitivity
Day to Night: 4
Night to Day: 7

Brightness: 15
Contrast: 15
Color: 15
Sharpness: 8
Mirror Image: None

- Day / Night
  - › Day / Night Mode : Measures the illumination of camera to shift into color or black/white video and change its day/night filter depending on illumination condition.
    - AUTO : Your camera measures the illumination and changes its settings automatically.
    - DAY : Displays video in color mode regardless of illumination and fixes its filter to day.
    - NIGHT : Displays video in black/white mode regardless of illumination and fixes its filter to night.

✔ <**AUTO**>, <**0 sec**> is recommended in usual environment.

  - › Day / Night Sensitivity : Adjust the sensitivity depending on the illuminance of day and night.
    - Day to Night : Sets the Sensitivity for Day to Night switching within the range of 0 through 7.
    - Night to Day : Sets the Sensitivity for Night to Day switching within the range of 3 through 10.

✔ The value of Day to Night switching must be smaller than that of Night to Day by 3 or more steps.

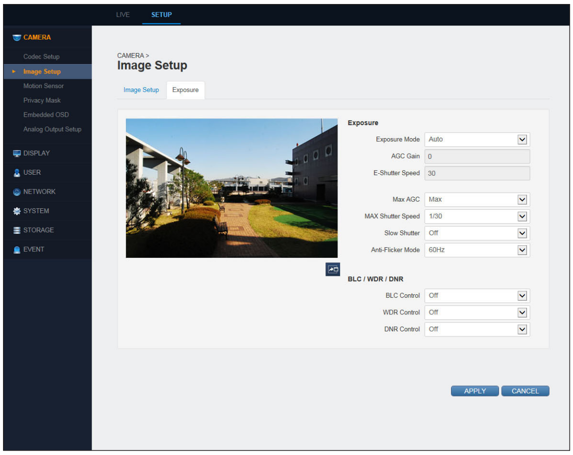
- Image Property Control

  You can set the Sharpness, Brightness, Contrast, and Color for image.

✔ The bigger the number is, the bigger the camera setting value is. Except for some special cases, default values are recommended.

2. EXPOSURE

- Exposure



Exposure
Exposure Mode: Auto
AGC Gain: 0
E-Shutter Speed: 30
Max AGC: Max
MAX Shutter Speed: 1/30
Slow Shutter: Off
Anti-Flicker Mode: 60Hz

BLC / WDR / DNR
BLC Control: Off
WDR Control: Off
DNR Control: Off

  - › Exposure Mode : Selects your desired exposure mode.
    - AUTO : The camera controls every exposure. If selecting <**AUTO**>, you cannot use some secondary menus (AGC Gain, e-Shutter Speed).
    - MANUAL : Controls camera's exposure manually. To compensate for small amount of light, adjust the "**AGC Gain, e-Shutter Speed**" to the values entered by user.

  ✔ For your convenience, <**AUTO**> is recommended for Exposure Mode.

  ✔ Compared with AUTO, the AUTO (Motion Priority) has less motion blur under usual levels of brightness.

  - › MAX AGC : AGC is the abbreviation for Automatic Gain Control. When too strong level of signal is input, the AGC adjusts the Gain (film sensitivity) to prevent the signal from being saturated. When too weak level of signal is input, the AGC adjusts the Gain to keep a certain level of signal.
    - Maximum AGC sets the peak Gain which is applied to low light level environment. It is classified into LOW/MID/HIGH/MAX. Higher the value the screen looks brighter, but may increase noise.
  - › MAX Shutter Speed : Set the maximum shutter speed to 1/30, 1/60, 1/120, 1/180, 1/240, 1/300, or 1/360 for NTSC or 1/25, 1/50, 1/100, 1/150, 1/200, 1/250, or 1/300 for PAL.
  - › Slow Shutter : Specifies whether to use digital sense-up mode or not.
    - OFF : Disables DSS (Slow Shutter). You can use DSS in X2, X4, or X8 mode.

  ✔ If you use the sense-up mode in a dark place with very low light level, you can watch a much brighter video since the brightness still remains at the specified level. However, the video FPS becomes slower in this case.

  - › Anti-Flicker Mode : Adjusts the exposure settings when using the camera in a place where fluorescent light is turned on.
    You can use this mode when screen flickers. '60 Hz' is generally specified as its value in Korea.

- BLC / WDR / DNR
  - › BLC Control : Use this function to compensate scenes which are too bright under a backlight condition such as framing a bright window or open door from the inside. In such a case, using the function allows the camera to produce better images of the dark objects displayed on a monitor. BLC (Backlight Compensation) is classified into OFF/ADAPTIVE/ZONE.
    - OFF : Disables the BLC (Backlight Compensation) function.
    - ADAPTIVE : Applies BLC without considering the location of bright area.
    - ZONE : If you specify a bright area as Zone, the BLC is applied to the Zone. If you don't specify properly, the screen may look darker.

  ✔ BLC function is useful in most cases when framing a window or door with backlight. For outdoor camera installation, it is recommended to set BLC (Backlight Compensation) function to <**OFF**>.

  - › WDR Control : Wide Dynamic Range (WDR) is a feature that allows for different objects at different exposures to be viewed in the same scene (ex; one object in a bright area and one in a dark area).
  - › DNR Control : use temporal and spatial noise reduction to improve image quality and reduce video noise. This can be set to OFF, AUTO, or to MANUAL levels.

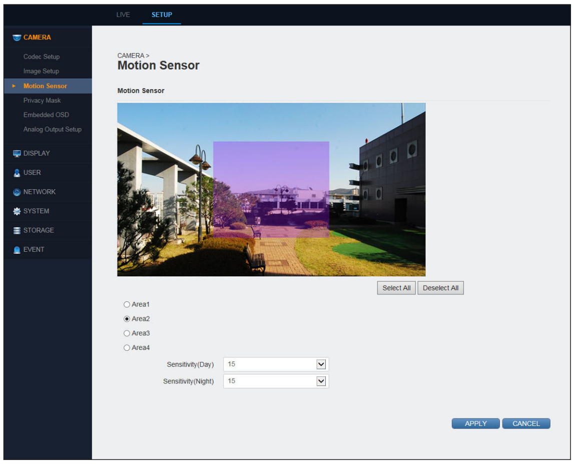
Web Viewer

Motion Sensor

When motion is detected in specified area, you can get E-mail notification or the image transferred via FTP or e-mail.
When completed, click <**APPLY**> to apply.

- Select Area : You can select up to 4 different motion areas.
- Sensitivity(Day) : You can set the daytime sensitivity for the selected area within the range of 1 through 30.
- Sensitivity(Night) : You can set the nighttime sensitivity for the selected area within the range of 1 through 30.
- Select All : Selects all the areas.
- Deselect All : Deselects all the areas.

✔ If you specified multiple "Motion" areas, some of camera functions may be slow down.


LIVE
SETUP
CAMERA
Codec Setup
Image Setup
Motion Sensor
Privacy Mask
Embedded OSD
Analog Output Setup
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Select All
Deselect All
APPLY
CANCEL

CAMERA >
Motion Sensor

Motion Sensor

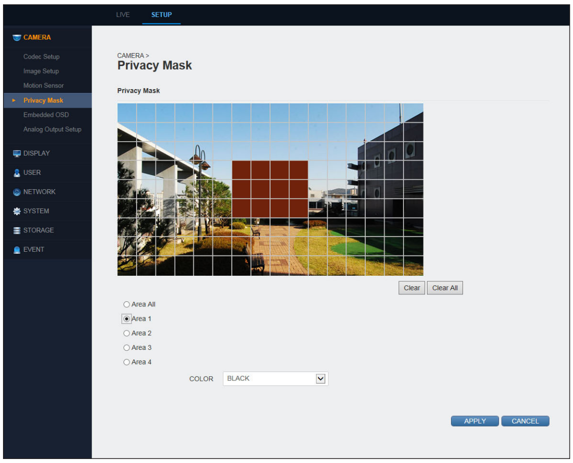
○ Area1
● Area2
○ Area3
○ Area4

Sensitivity(Day) 15
Sensitivity(Night) 15

Privacy Mask

You can directly specify a certain area of the camera video to be blocked to protect privacy.
When completed, click <**APPLY**> to apply.

- Select Area : Allows to select up to 4 different areas to be blocked to protect privacy.
- Color : Allows to specify blocking color for each area.
- Clear : Allows to deselect specified blocking area(s).
- Clear All : Deselects all the areas.


LIVE
SETUP
CAMERA
Codec Setup
Image Setup
Motion Sensor
Privacy Mask
Embedded OSD
Analog Output Setup
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Clear
Clear All
APPLY
CANCEL

CAMERA >
Privacy Mask

Privacy Mask

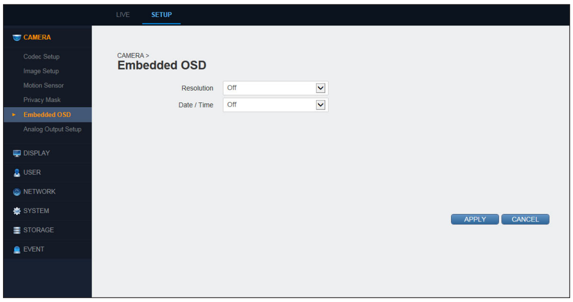
○ Area All
● Area 1
○ Area 2
○ Area 3
○ Area 4

COLOR BLACK

Embedded OSD

You can select whether to display the resolution and date/time on live screen.
When completed, click <**APPLY**> to apply.

- Resolution : Specifies whether to display camera resolution on screen or not.
- Date / Time : Specifies whether to display date/time on screen or not.


LIVE
SETUP
CAMERA
Codec Setup
Image Setup
Motion Sensor
Privacy Mask
Embedded OSD
Analog Output Setup
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

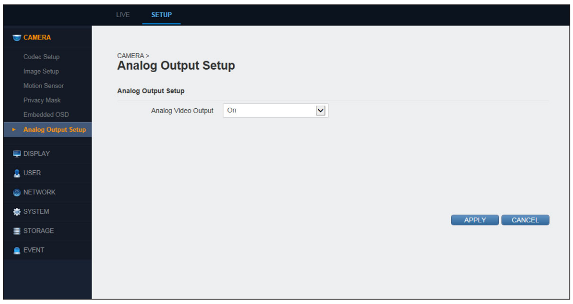
CAMERA >
Embedded OSD

Resolution: Off
Date / Time: Off

Analog Output Setup

If you use the analog video output when installing your camera, you can adjust the camera angle by checking how it is displayed on screen in the installation field.
When completed, click <**APPLY**> to apply.

✔ The analog video output is a dedicated function only for camera installation process. If finishing your camera installation, select <**OFF**> and press the <**APPLY**> button.


LIVE
SETUP
CAMERA
Codec Setup
Image Setup
Motion Sensor
Privacy Mask
Embedded OSD
Analog Output Setup
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

CAMERA >
Analog Output Setup

Analog Output Setup

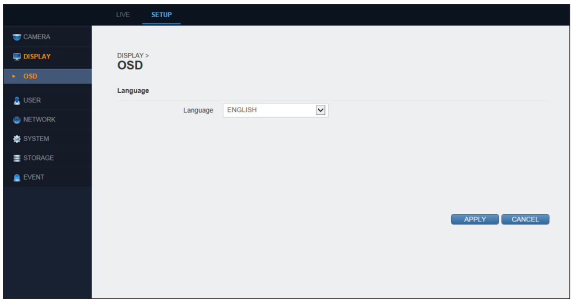
Analog Video Output: On

DISPLAY

OSD

You can set the language of the system display. The interface will be displayed in selected language by default, and individual user can specify his/her preferred language. If changed this language setting, the setting of Session Configuration → Language is also changed accordingly.

- LANGUAGE : select a menu display language.


LIVE
SETUP
CAMERA
DISPLAY
OSD
USER
NETWORK
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

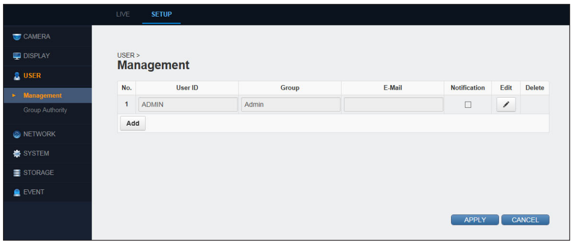
DISPLAY >
OSD

Language

Language: ENGLISH

USER

Management


LIVE
SETUP
CAMERA
DISPLAY
USER
Management
Group Authority
NETWORK
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

USER >
Management

No.	User ID	Group	E-Mail	Notification	Edit	Delete
1	ADMIN	Admin		☐	✎	

Add

You can add or delete a user account and change password.
When completed, click <**APPLY**> to apply.

- Add/Edit/Delete : Add, edit, or delete a user account.

✔ You can register up to 8 accounts including '**ADMIN**'.

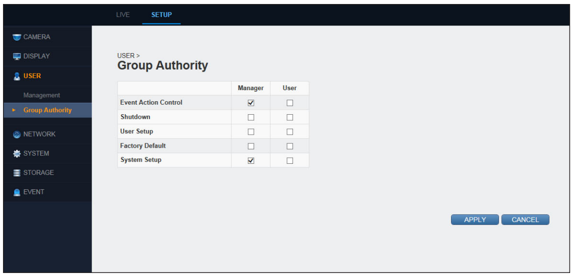
- User ID : You can log in to network camera with '**User ID**'.
- Group : Select the permission of user account.
  - Admin : Allowed to change all the camera settings.
  - User : Permission to the Live function is allowed to a user by default (you can modify the default permission settings).
  - manager : Permission to the Live function and other selected settings are allowed to a user by default (you can modify the default permission settings).

! The permission of Manager or User may be different depending on the Group Authority settings.

- E-mail : Enter the target e-mail address which will receive the event notification.
- Notification : Select whether to use the E-mail Notification function or not.

✔ You cannot delete or change '**ADMIN**' which is main administrator account ID. (allowed to change password)
You cannot add new account with the same <**User ID**> and <**Password**>.

Group Authority


LIVE
SETUP
CAMERA
DISPLAY
USER
Management
Group Authority
NETWORK
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

USER >
Group Authority

	Manager	User
Event Action Control	☑	☐
Shutdown	☐	☐
User Setup	☐	☐
Factory Default	☐	☐
System Setup	☑	☐

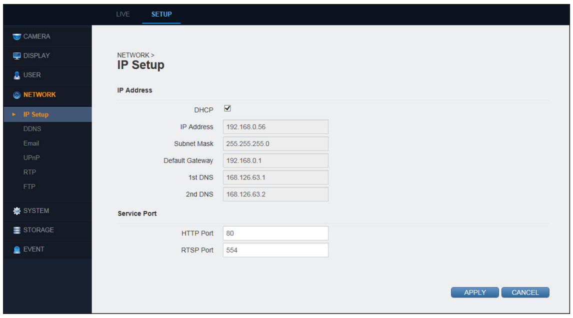
You can grant different user groups different permissions to a specific menu.
When completed, click <**APPLY**> to apply.

- Event Action Control : Set the permissions to output the alarm or control the buzzer if an event such as alarm occurs.
- Shutdown : Set the permission to turn off the camera.
- User Setup : Set the permission for User Setup.
- Factory Default : Set the permission to perform the Factory Default.
- System Setup : Set the permissions for the System Setup menu.

NETWORK

IP Setup

You can modify and check the camera network settings. Set each items. When completed, click <**APPLY**> to apply.



IP Address

DHCP ☑

IP Address: 192.168.0.56

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.0.1

1st DNS: 168.126.63.1

2nd DNS: 168.126.63.2

Service Port

HTTP Port: 80

RTSP Port: 554

- IP Address
  - › DHCP : If router or internet sharer in (local) network where your camera is installed, you can use "DHCP" function to apply the network settings including camera IP address automatically.
    - IP Address : Enter the camera IP address. (Press ‘PING TEST’ to check if the IP is currently used or not.)
    - Subnet Mask : Enter the subnet mask value of your camera.
    - Default Gateway : Enter the gateway value of your camera.
    - 1st DNS : Enter the 1st domain name of your camera.
    - 2nd DNS : Enter the 2nd domain name of your camera.

- Service Port

  You can enter the port by clicking the input field of each port.

  - › HTTP Port : Allows to change the port number of web service.
  - › RTSP Port : Supports AV streaming server to set port number.

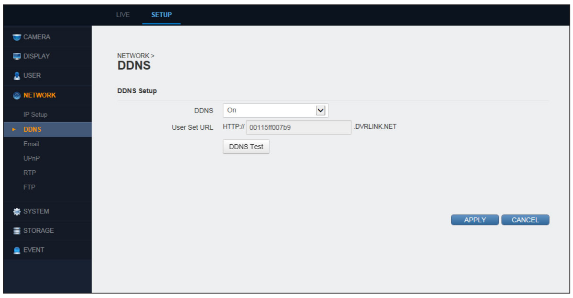
✔ RTSP : A protocol to send/receive sound or movie in real time

! If you change the settings without basic knowledge on network, you may not be able to access the camera.
If you are forced to change the settings, contact the implementation service provider or network engineer.

DDNS

You can configure the DDNS settings.
When completed, click <**APPLY**> to apply.

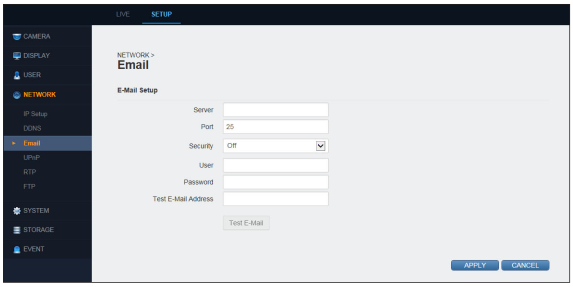
- DDNS : Select whether to use DDNS service or not.
- User Set URL : Available if entering the domain address which would be used as a DDNS domain.
- DDNS Test : Allows you to test the DDNS service for provided domain address.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
IP Setup
DDNS
Email
UPnP
RTP
FTP
SYSTEM
STORAGE
EVENT
NETWORK >
DDNS
DDNS Setup
DDNS Test
APPLY
CANCEL

DDNS: On
User Set URL: HTTP:// 00115ff007b9 .DVRLINK.NET

E-mail

When an even occurs at camera, you can send a message to specified e-mail address by using SMTP.
To send message, enter mail server or user account information.
When completed, click <**APPLY**> to apply.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
IP Setup
DDNS
Email
UPnP
RTP
FTP
SYSTEM
STORAGE
EVENT
NETWORK >
Email
E-Mail Setup
Server
User
Password
Test E-Mail Address
Test E-Mail
APPLY
CANCEL

Port: 25
Security: Off

- Server : Enter the sending mail server (smtp).
- Port : Enter the port of sending mail server.
- Security : Select whether to use the security function of mail server or not.
- User : Enter the user name of sending mail server.
- Password : Enter the password of sending mail server.
- Test E-Mail Address : Enter the recipient’s e-mail address and use the <**Test E-Mail**> button to test e-mail.

✔ E-mail (SMTP) setup process is different depending on user's e-mail address (portal company). For more information, search for "SMTP setup" in the internet or contact your network administrator.

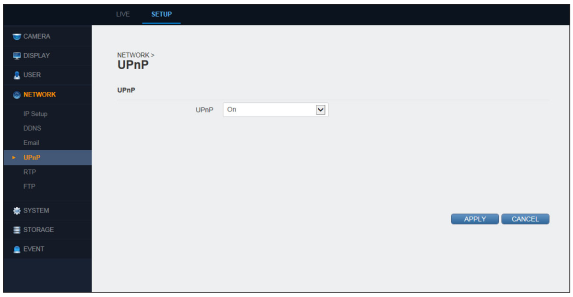
UPnP

You can set whether to use the UPnP function or not.
When completed, click <**APPLY**> to apply.

- UPnP : Select whether to use UPnP function or not.

✔ A router or internet sharer with UPnP function should be connected with the network where the camera has been installed.

✔ To use the UPnP function of camera, the internet sharer should support the UPnP function.
Though the UPnP function is generally supported by internet sharer, some internet sharers may not support.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
IP Setup
DDNS
Email
UPnP
RTP
FTP
SYSTEM
STORAGE
EVENT
NETWORK >
UPnP
UPnP
APPLY
CANCEL

UPnP: On

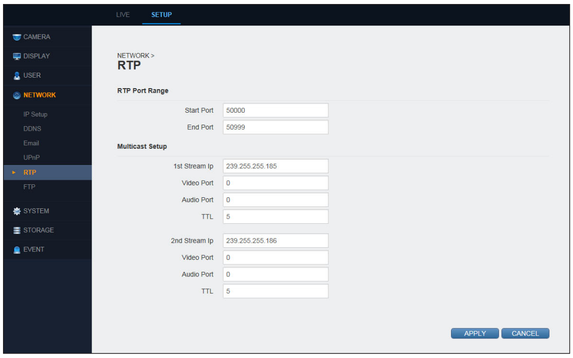
RTP

- RTP Port Range
  - › Start Port : Set the range of start port.
  - › End Port : Set the range of Last port.

✔ **RTP (Real-time Transport Protocol)** is a protocol designed to transport real-time data such as sound, video, etc. under unicast or multicast condition.

- Multicast Setup
  - › 1st Stream IP / Video Port / Audio Port / TTL : Specifies the IP address of main stream, video port, audio port and TTL.
  - › 2st Stream IP / Video Port / Audio Port / TTL : Specifies the IP address of secondary stream, video port, audio port and TTL.

✔ **Multicast** is a method to send the same data to multiple specific receivers simultaneously in a network.This method cuts down on network waste, gets rid of unnecessary burden, and is generally used in unrestricted network (intranet).


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
IP Setup
DDNS
Email
UPnP
RTP
FTP
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

NETWORK >
RTP

RTP Port Range

Start Port: 50000
End Port: 50999

Multicast Setup

1st Stream Ip: 239.255.255.185
Video Port: 0
Audio Port: 0
TTL: 5

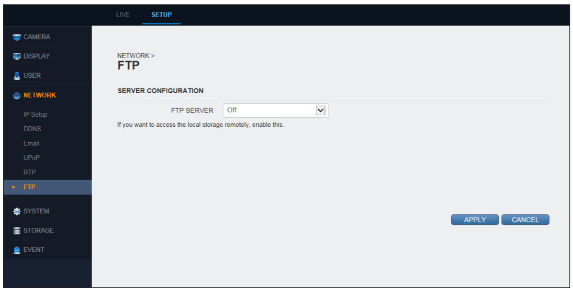
2nd Stream Ip: 239.255.255.186
Video Port: 0
Audio Port: 0
TTL: 5

FTP

You can configure the FTP settings so that you can transfer the images saved in camera's storage media to your PC if an event or alarm occurs.
When completed, click <**APPLY**> to apply.

- Server Configuration
  - › FTP Server : <**OFF**> is selected by default.

✔ This function is available only if SD card is mounted.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
IP Setup
DDNS
Email
UPnP
RTP
FTP
SYSTEM
STORAGE
EVENT
APPLY
CANCEL

NETWORK >
FTP

SERVER CONFIGURATION

FTP SERVER: Off

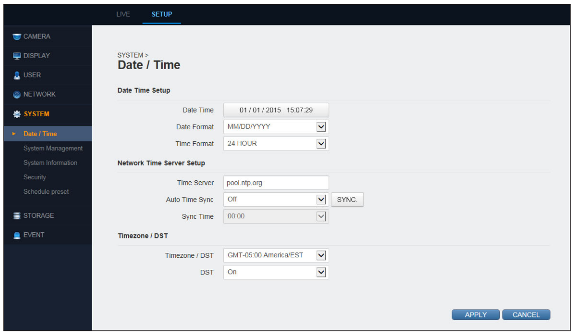
If you want to access the local storage remotely, enable this.

Web Viewer

SYSTEM

Date / Time

You can set configurable date for system.
When completed, click <**APPLY**> to apply.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
Date / Time
System Management
System Information
Security
Schedule preset
STORAGE
EVENT
SYNC.
APPLY
CANCEL

SYSTEM >
Date / Time

Date Time Setup

Date Time: 01 / 01 / 2015 15:07:29
Date Format: MM/DD/YYYY
Time Format: 24 HOUR

Network Time Server Setup

Time Server: pool.ntp.org
Auto Time Sync: Off
Sync Time: 00:00

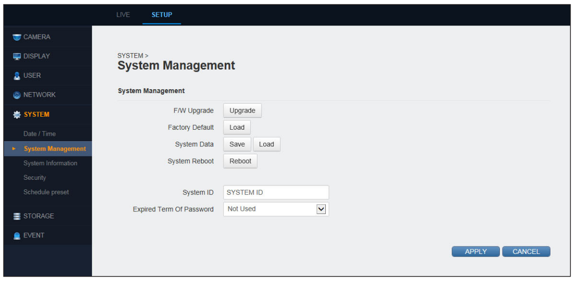
Timezone / DST

Timezone / DST: GMT-05:00 America/EST
DST: On

- Date Time Setup
    - Date Time : Displays the date and time of current network camera.
    - Date format : Select your desired date format.
    - Time format : Select your desired time format.
- Network Time Server Setup
    - Time Server : Enter server IP or host name.
    - Auto Time Sync : Synchronizes the time automatically. Click the <**Sync.**> to synchronize system server time to an NTP server.
    - Sync Time : If the Auto Time Sync is set to On, the system time is synchronized to the NTP server time in specified due time.
- Timezone / DST
    - Timezone / DST : Select your desired time zone (divided into 24 time zones in the world)
    - D.S.T : Select whether to use Daylight Saving Time or not.

System Management

You can rename the network camera, restart the system, initialize to factory defaults, and update the firmware.
When completed, click <**APPLY**> to apply.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
Date / Time
System Management
System Information
Security
Schedule preset
STORAGE
EVENT
Upgrade
Load
Save
Load
Reboot
APPLY
CANCEL

SYSTEM >
System Management

System Management

F/W Upgrade
Factory Default
System Data
System Reboot

System ID: SYSTEM ID
Expired Term Of Password: Not Used

- F/W Upgrade : Updates camera firmware.

❗ If network transfer rate is slow, error may occur during firmware update process.

❗ It is recommended to update your firmware during your camera and PC are connected with local network.

❗ Do not shut down devices during firmware update process.
Camera will restart if update is finished. (It takes about 2~5 minutes)

- Factory Default : Restores your camera settings to factory defaults. (It takes about 1 minute)

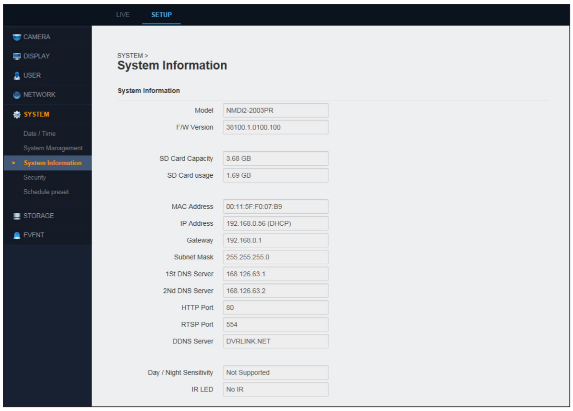
✔ If you perform the <**Factory Default**>, all the settings including camera network settings will be initialized.

- System Data : Save the system settings or get the system information from other device.
- SAVE : Save the settings of your camera in connected PC.
- LOAD : Copy the settings saved in the connected PC to the camera.
- System Reboot : Restarts your network camera.(It takes about 1 minute)
- System ID : Renames your camera.
- Expired Term Of Password : You will be prompted to change the current password after a certain period of time.

System Information

You can confirm the firmware version, model name, MAC address, IP address, etc. of your camera.

- Model : Displays camera ‘**Model Name**’.
- F/W Version : Displays camera ‘**F/W Version**’.
- MAC Address : Displays camera ‘**MAC Address**’.
- Others : Displays network setup information for the camera.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
Date / Time
System Management
System Information
Security
Schedule preset
STORAGE
EVENT

SYSTEM >

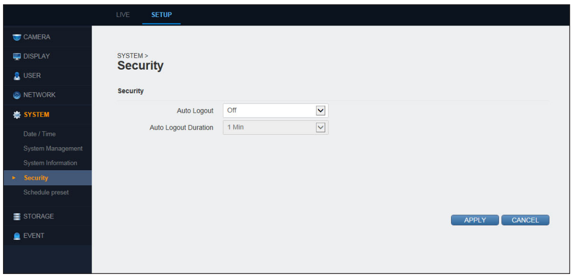
System Information

System Information

Model	NMDi2-2003PR
F/W Version	38100.1.0100.100
SD Card Capacity	3.68 GB
SD Card usage	1.69 GB
MAC Address	00:11:5F:F0:07:B9
IP Address	192.168.0.56 (DHCP)
Gateway	192.168.0.1
Subnet Mask	255.255.255.0
1St DNS Server	168.126.63.1
2Nd DNS Server	168.126.63.2
HTTP Port	80
RTSP Port	554
DDNS Server	DVRLINK.NET
Day / Night Sensitivity	Not Supported
IR LED	No IR

Security

- Auto Logout : If there is no user input for a certain period of time, you can set to log out automatically.
- Auto Logout Duration : Specify the waiting time for Auto Logout.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
Date / Time
System Management
System Information
Security
Schedule preset
STORAGE
EVENT
APPLY
CANCEL

SYSTEM >

Security

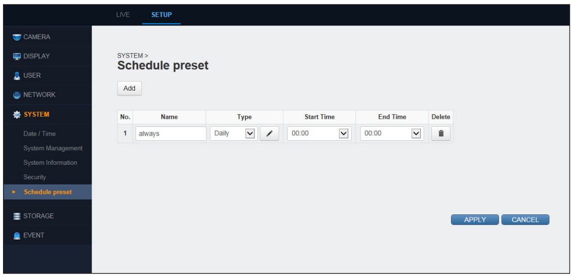
Security

Auto Logout	Off
Auto Logout Duration	1 Min

Schedule Preset

This function configures the Preset actions which will be activated during a live Event. Use the Schedule Preset function to arrange a schedule for a set of specific actions at specified time and then associate it with a specific event.

- Name : Enter the name of preset.
- Type : You can select one between <**Daily**> and <**Weekly**>, and decide your desired weekday(s) by clicking the < ✎ >.
- Start/End Time : Set the start time and end time for schedule preset.
- Add/Delete : Add or delete your desired schedule preset.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
Date / Time
System Management
System Information
Security
Schedule preset
STORAGE
EVENT
Add
APPLY
CANCEL

SYSTEM >

Schedule preset

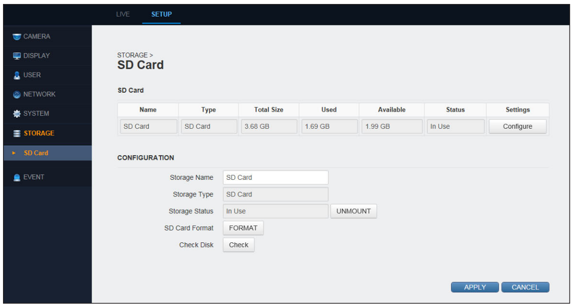
No.	Name	Type	Start Time	End Time	Delete
1	always	Daily	00:00	00:00	

STORAGE

SD Card

You can set the inserted SD card directly.
When completed, click <**APPLY**> to apply.

- SD Card
  - Total Size : Displays the total capacity of SD card.
  - Used : Displays the occupied capacity of SD card.
  - Available : Displays the remaining capacity of SD card.
  - Status : Displays the information about SD card status.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
SD Card
EVENT
Configure
UNMOUNT
FORMAT
Check
APPLY
CANCEL

STORAGE >
SD Card

SD Card

Name	Type	Total Size	Used	Available	Status	Settings
SD Card	SD Card	3.68 GB	1.69 GB	1.99 GB	In Use	Configure

CONFIGURATION

Storage Name: SD Card
Storage Type: SD Card
Storage Status: In Use

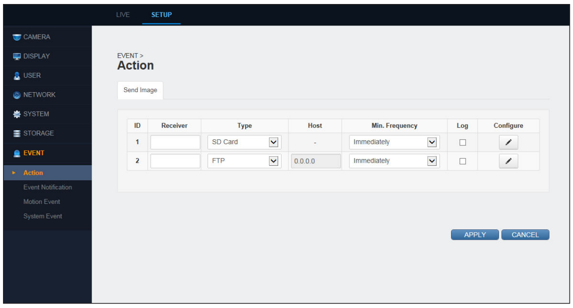
- Configuration
  - Storage Name : You can rename the storage device.
  - Storage Type : Displays the type of the storage device.
  - Storage Status : Displays the information about SD card status. Click the <**UNMOUNT**> to safely dismount the SD card.
  - SD Card Format : Formats the SD card.
  - Check Disk : Checks the status of your storage device.

> ✔ If the front cover is not completely fastened after mounting your SD card, the inside of camera may get damp.

EVENT

Action

1. Send Image


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Action
Event Notification
Motion Event
System Event
APPLY
CANCEL

EVENT >
Action

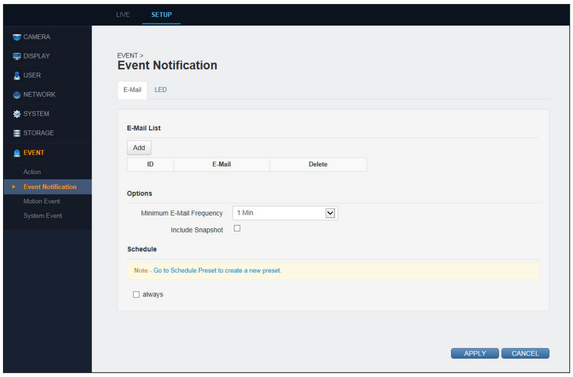
Send Image

ID	Receiver	Type	Host	Min. Frequency	Log	Configure
1		SD Card	-	Immediately	☐	
2		FTP	0.0.0.0	Immediately	☐	

- › Receiver : Enter the recipient's e-mail address to send the image.
- › Type : Send the image in your preferred type between <**SD card**> and <**FTP**>.
- › Host : If selecting <**FTP**> type, you can specify the host.
- › Min. Frequency : Specify the event transfer interval (Immediately or within 5~300 seconds).
- › Log : Specify whether to include the log or not when transferring the event.
- › Configure : You can set the <**Receiver Type**>, <**Receiver**>, <**Min.Frequency**>, <**Log**> and your preferred <**Schedule**>.

Event Notification

1. E-Mail


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Action
Event Notification
Motion Event
System Event
E-Mail
LED
Add
APPLY
CANCEL

EVENT >
Event Notification

E-Mail List

ID	E-Mail	Delete

Options

Minimum E-Mail Frequency: 1 Min

Include Snapshot ☐

Schedule

Note - Go to Schedule Preset to create a new preset.

☐ always

- E-Mail List

  When an event occurs, you can send an e-mail to preset address.

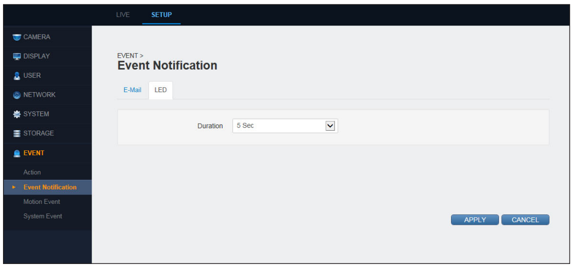
- Options
  - › Minimum E-Mail Frequency : Specify the minimum e-mail frequency for notification.
  - › Include Snapshot : Select whether to include snapshot(s) or not.

- Schedule

  You can select your preferred event notification schedule.

✔ To set your preferred schedule, make a new preset in "**SYSTEM** > **Schedule preset**" (page 33).

2. LED


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Action
Event Notification
Motion Event
System Event
E-Mail
LED
APPLY
CANCEL

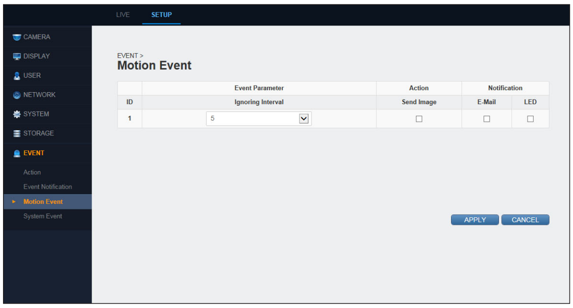
EVENT >
Event Notification

Duration: 5 Sec

- › Duration : Specify the LED blinking duration for event notification between Transparent or within 5~300 seconds.

Motion Event

- Event Parameter
  - › Ignoring Interval : Select the ignoring duration for detected motion event in the range of 5 through 30 seconds.

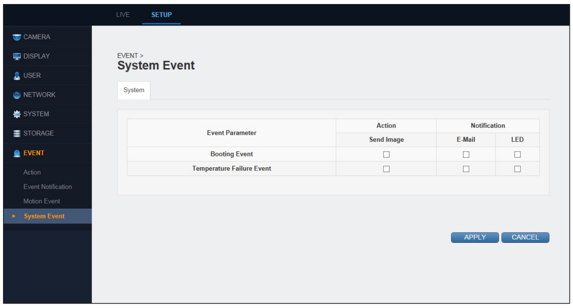

LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Action
Event Notification
Motion Event
System Event
APPLY
CANCEL

EVENT >
Motion Event

	Event Parameter	Action	Notification	
ID	Ignoring Interval	Send Image	E-Mail	LED
1	5	☐	☐	☐

System Event

- Event Parameter
  - › Booting Event : Specify to activate an event when the system boots up.
  - › Temperature Failure Event : Specify to activate an event when a system temperature failure is detected.


LIVE
SETUP
CAMERA
DISPLAY
USER
NETWORK
SYSTEM
STORAGE
EVENT
Action
Event Notification
Motion Event
System Event
System
APPLY
CANCEL

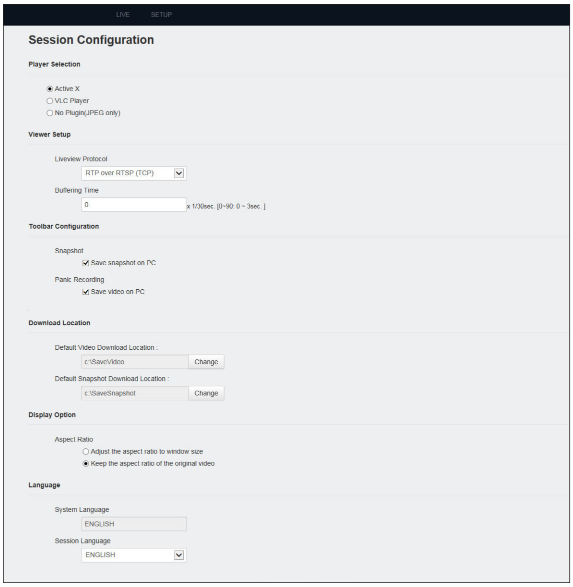
EVENT >
System Event

Event Parameter	Action	Notification	
	Send Image	E-Mail	LED
Booting Event	☐	☐	☐
Temperature Failure Event	☐	☐	☐

Session Configuration

The Session Configuration influences only the browser in use. It has no effect on any other user.

! This is not the data saved in your camera. The configuration may have a different action depending on the internet browser.



Session Configuration

Player Selection

● Active X
○ VLC Player
○ No Plugin(JPEG only)

Viewer Setup

Liveview Protocol: RTP over RTSP (TCP)
Buffering Time: 0 x 1/30sec. [0~90: 0 ~ 3sec.]

Toolbar Configuration

Snapshot: ☑ Save snapshot on PC
Panic Recording: ☑ Save video on PC

Download Location

Default Video Download Location : c:\SaveVideo
Default Snapshot Download Location : c:\SaveSnapshot

Display Option

Aspect Ratio
○ Adjust the aspect ratio to window size
● Keep the aspect ratio of the original video

Language

System Language: ENGLISH
Session Language: ENGLISH

- Player Selection

  Select <**Active X**>, <**VLC Player**>, or <**No PlugIn (JPEG only)**> for the player.
- Viewer Setup
  - LiveView Protocol : You can select one among RTP Unicast (UDP) / RTP Multicast (UDP) / RTP over RTSP (TCP).
  - Buffering Time : Displayed in (0~90) x 1/30 sec. (0~3 sec.)

  ! If buffering time is slow, the video transmission is delayed.
- Toolbar Configuration
  - Snapshot : For capturing a snapshot, specify whether to save it in PC or not.
  - Panic Recording : Specify whether to save the emergency video in the PC or not.
- Download Location
  - Default Video Download Location : Change default video download path.
  - Default Snapshot Download Location : Change default snapshot download path.
- Display Option
  - Aspect Ratio

    Select <**Adjust the aspect ratio to window size**> or <**Keep the aspect ratio of the original video**> for aspect ratio.
- Language

  You can specify the <**System Language**> and <**Session Language**>.

- Protocols and Communication Methods

  Protocol : Specifies the protocol to be used by web remote viewer (PC) to access to the network camera.

  ✔ RTP Unicast(UDP) : UDP (User Datagram Protocol) is a communications protocol that doesn't check if the transferred data have been received or not.

  - Cons : The video may look broken (mosaic) due to data loss.
  - Pros : The video (FPS) can be played in multiple clients without being disconnected.

  ✔ RTP Multicast(UDP) : Multicast is a method of sending the same data to multiple specific receivers simultaneously in a network.

  This method cuts down on network waste, gets rid of unnecessary burden, and is generally used in unrestricted network (intranet).

  ✔ RTP over RTSP (TCP) : TCP (Transmission Control Protocol) is a protocol that controls the data transmission in a network.

  It guarantees that the data will be delivered in the same order in which they were sent.

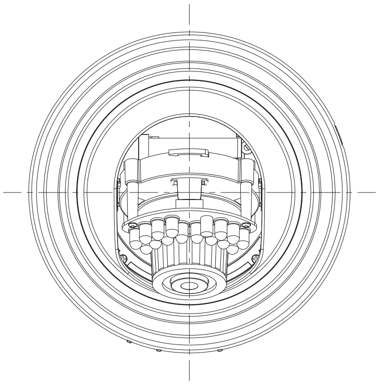
  - Pros : When network is unstable, you can minimize the scale of broken video (mosaic).
  - Cons : Produces more network communication from the camera and may cause video stuttering if many clients are connected to a camera (poor FPS)

Troubleshooting (FAQ)

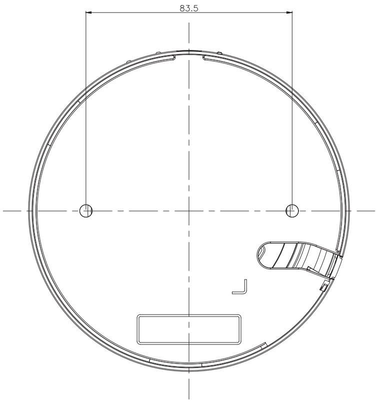
Problem and Symptom	Solution
I can't turn on camera.	• Check the UTP cable connection. • If you use PoE power supply, check if enough power is supplied to PoE switch.
PC is not connected with network camera.	• Check the status of LAN cable connected to network camera and the status of hub. • If the network camera's network setting was set to DHCP, check the IP address history of the DHCP server (router). • Check if camera network settings are changed or not by using ADMIN TOOL.
I cannot access via web or mobile application.	• Check if the network cable for internet access is correctly connected with the LAN port in main body. • If you use sharer, check if port forwarding is correctly configured.
I cannot watch any video even though I can access to web or mobile application.	• If you use sharer, check if port forwarding is correctly configured. • It may happen since communication company or network administrator has blocked the service port of network camera. • Change the RTSP port and HTTP port of your network camera and configure the port forwarding of sharer again. • Retry to access to web or mobile application by using new port.

Appendix

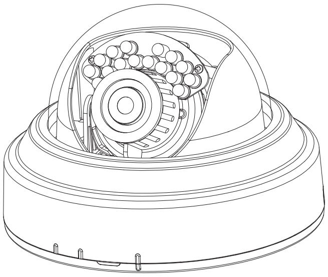
Product Overview

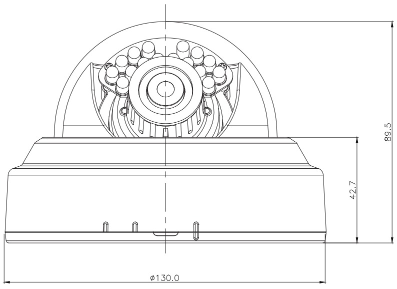


<TOP VIEW>



<BOTTOM VIEW>




89.5
42.7
ø130.0

<FRONT VIEW>

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Version 2, June 1991

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51 Franklin S

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